

APPENDIX G

OAK MANAGEMENT AND PRESERVATION PLAN





OAK MANAGEMENT AND PRESERVATION PLAN

RANCHO LAS LOMAS PROJECT

Prepared for

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August 28, 2012

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1.0 INTRODUCTION

The Oak Management and Preservation Plan (OMPP) described herein provides guidelines for the replacement, protection, and ongoing management of oak tree resources during project construction and the ongoing operation of the Rancho Las Lomas Project (hereinafter referred to as “the project”). The OMPP has been developed in compliance with the conditions set forth in the *Foothill/Trabuco Specific Plan* (County of Orange 1991) and with Mitigation Measure (MM) 5.4-6 of the *Mitigated Negative Declaration for the Rancho Las Lomas Project* (BonTerra Consulting 2012b).

2.0 PROGRAM BACKGROUND

2.1 PROJECT LOCATION

The proposed project is located entirely within unincorporated Orange County (Exhibit 1) at 19191 Lawrence Canyon in Silverado, California. Lawrence Canyon is accessed from Santiago Canyon Road, approximately ¼ mile north of the intersection of Santiago Canyon Road and Live Oak Canyon Road. The property is bordered on the north and south by large residential estates, on the west by a residential tract, and on the east by Santiago Canyon Road. Rancho Las Lomas is comprised of approximately 21.4 acres located in the Cleveland National Forest. Additionally, the project site is located within the *Foothill/Trabuco Specific Plan* (FTSP) planning area and is designated as the “Rancho Las Lomas District” in the Foothill/Trabuco Specific Plan Land Use Districts exhibit (County of Orange 1991; see Appendix A).

2.2 PROJECT SUMMARY

The project site is an existing event facility primarily used for weddings. A series of buildings, patios, decks, and staircases are interspersed with the woodlands in the eastern half of the project site. The facility also contains a zoological garden with enclosures for llamas (*Lama* sp.), zebras (*Equus* sp.), and tigers (*Panthera tigris*) as well as a reptile house and several aviaries. Parking lots, storage, and support structures are located on the slopes in the western portion of the project site. Land uses adjacent to the project site include residential to the west, north, and northeast, and transportation (i.e., Santiago Canyon Road) and open space to the east and south.

One new structure is proposed for construction within the Rancho Las Lomas property. The proposed structure will consist of a gazebo to be constructed on top of an existing pad (Structure A-C). The proposed project also includes the demolition and replacement of three existing culverts/bridges located within Aliso Creek with free-span bridges, as follows: one existing pedestrian bridge/culvert structure will be removed and replaced with one free-span pedestrian bridge, and two existing vehicle bridge/culvert structures will be removed and replaced with two free-span vehicle bridges. Additionally, cement and road fill (deposited by a previous landowner) will be removed from various portions of the streambed area during bridge replacement activities.

Additionally, implementation of a fuel modification program is required by the Orange County Fire Authority (OCFA) as set forth in the *Guideline for Fuel Modification Plans and Maintenance Program* (OCFA 2008). Fuel modification guidelines require that fuel maintenance be performed as needed on an ongoing basis within specific zones surrounding each existing and proposed structure. Zone A (within 20 feet of structures) requires that all structures use non-combustible material. Zone B (a minimum of 50 feet beyond Zone A) is called the “wet zone” and requires 100 percent removal of native shrubs that are considered a fire hazard; however, trees within this zone do not have to be removed. Zone C (50 feet beyond Zone B or at variable widths) is called the “dry zone” and requires 50 percent thinning of native shrubs that are considered a fire

hazard. Zone D (50 feet beyond Zone C) is also called the “dry zone” and requires 30 percent thinning of native shrubs that are considered a fire hazard. Trees in Zones C and D do not have to be removed or thinned. A ten-foot-wide Roadside Clearance Zone (irrigated landscape) will be located along project access roads outside Zones A through C. The OCFA has agreed that none of the trees on the project site need to be removed or thinned for fuel modification purposes; therefore, the fuel modification would only impact the understory of vegetation found on site. The existing and proposed structures and their respective fuel modification zones are shown in Appendix B; impact boundaries were developed from project plans provided by Andrade Architects and the Fuel Modification Plan provided by Firesafe Planning Solutions. Impact boundaries are shown in Exhibit 2.

3.0 EXISTING BIOLOGICAL RESOURCES

This section summarizes existing conditions and natural resources on and adjacent to the project site; the anticipated types of impacts to these resources resulting from the proposed project; and guidelines for protecting oak woodland resources.

The natural terrain of the site is characterized by gentle to moderately sloping terraces adjoining the canyon bottom of Aliso Creek in the eastern $\frac{1}{3}$ of the project site, and steeper, more rugged hillside ascending westward into the remaining $\frac{2}{3}$ of the site. Maximum topographic relief is approximately 231 feet, ranging from a high of 1,346 feet above mean sea level (msl) near the southwestern corner of the property, to a low of 1,115 feet above msl in the southeastern corner.

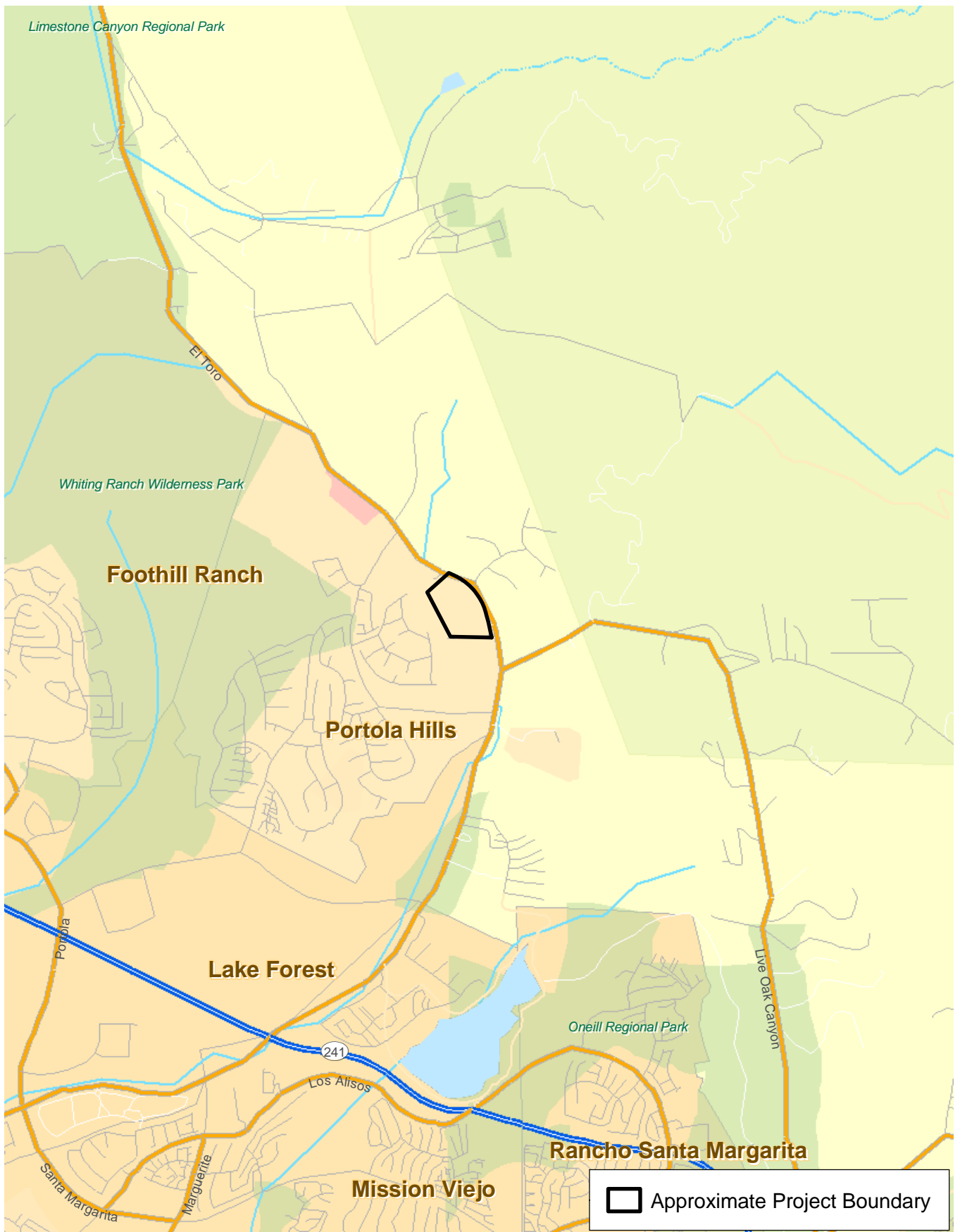
Vegetation on the site consists of a mix of ornamental vegetation and native vegetation types (BonTerra Consulting 2012a). Oak woodland vegetation types include sycamore-oak riparian forest, coast live oak woodland, and coast live oak woodland/ornamental. Other vegetation types on the project site consist of sagebrush sage scrub, toyon-sumac chaparral, southern willow scrub, southern coastal needlegrass grassland, ruderal, ornamental, and vineyards and orchards. Existing vegetation is shown on Exhibits 2 and 3.

Oak woodlands are dominated by coast live oak (*Quercus agrifolia*), with an understory of periwinkle (*Vinca major*) and cape honeysuckle (*Tecoma capensis*). Aliso Creek passes through the property and supports coast live oak and western sycamore (*Platanus racemosa*) as co-dominant species along with scattered willows (*Salix* sp.) and non-native species such as deodar cedar (*Cedrus deodara*), pines (*Pinus* spp.), palm trees (multiple unidentified species), and pampas grass (*Cortaderia selloana*). Understory species in the riparian areas consist largely of periwinkle and cape honeysuckle with less common castor bean (*Ricinus communis*), cheeseweed (*Malva parviflora*), and non-native grasses. Ornamental plantings are scattered throughout the site and include deodar cedars, pines, palm trees, oleander (*Nerium oleander*), and Peruvian pepper trees (*Schinus molle*), as well as orange tree orchards.

The project site provides moderate quality habitat for wildlife species that are characteristic of oak and sycamore woodlands; these include a variety of amphibian, reptile, bird, and mammal species. The mature trees of the woodland overstory provide high quality habitat for many wildlife species. However, the native understory has been cleared for fuel modification in many areas, which lowers the habitat value for some species. Additionally, because structures are interspersed within the woodlands, there is a high amount of human activity present during facility events, which may discourage use by some native species.

A large mammal movement evaluation (Loe 2004) concluded that movement in the Upper Aliso Canyon Watershed above Cook's Corner (i.e., the intersection of El Toro Road, Live Oak Canyon Road, and Santiago Canyon Road) has been severely impacted by roads and

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Local Vicinity

Exhibit 1

Oak Management and Preservation Plan
Rancho Las Lomas Project



0.5 0.25 0 0.5
Miles

Bonterra
CONSULTING

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numerous developments. Therefore, Aliso Creek is expected to be used to a limited extent for wildlife movement, typically by vagile species (e.g., birds, coyotes, and others).

3.1 TREE SPECIES

As noted above, the Rancho Las Lomas Project site is located within the *Foothill/Trabuco Specific Plan* area and is designated as the “Rancho Las Lomas District” by the FTSP’s Land Use Districts designations. The goal of the FTSP is to “set forth goals, policies, land use district regulations, development guidelines, and implementation programs in order to preserve the area’s rural character and to guide future development in the Foothill/Trabuco area” (County of Orange 1991). Specific Plan guidelines include a series of resource overlays, including an Oak Woodland Overlay, which address the protection and preservation of biological resources. Other protected resources addressed by FTSP include wildlife corridors and streambeds.

The purpose of the OMPP is to document the location of oak woodlands and all individual oak trees with a trunk diameter at breast height (dbh) greater than five inches on the project site, as required by FTSP.

3.1.1 METHODS

BonTerra Consulting Certified Arborist David Hughes (International Society of Arboriculture Certificate Number WE-7752A) surveyed the project site on March 6 and 13, 2009. The survey area included all areas within approximately 50 feet of proposed construction areas. A total of 77 trees located within this survey area meet FTSP minimum dbh criteria and are addressed in this report. Other native tree species and coast live oak trees with a dbh less than five inches were tagged and evaluated, but are not addressed in this report, as these tree species are regulated by the California Department of Fish and Game (CDFG), but not by FTSP.

The following information was recorded for all oak trees within the survey area: the number of trunks, height, canopy width, dbh, and qualitative ratings for each tree’s health and aesthetic quality. The location of each tree was either recorded with a Global Positioning System (GPS) handheld unit or was mapped by hand on the site plan where GPS coverage was poor. Each tree that was assessed was individually tagged on the northern side of the trunk (or the most accessible side of the tree) with a pre-numbered circular aluminum tag bearing the tree number. Using a diameter tape, measurements were taken at 4.5 feet above mean natural grade. When branching occurred below 4.5 feet, dbh was measured immediately below the lowest branch. For trees that had multiple trunks, each trunk was measured separately and then combined to determine the tree’s total dbh.

Tree aesthetics were evaluated with respect to overall form and symmetry, crown balance, branching pattern, and broken branches. The health of each tree was assessed based on visual evidence of vigor, such as the amount of foliage; leaf color and size; presence of branch or twig dieback; severity of insect infestation; the presence of disease, heart rot, fire damage, and/or mechanical damage; amount of new growth; appearance of bark; and rate of callous development over wounds. The tree’s structural integrity was also evaluated with respect to branch attachment, branch placement, root health, and stability. In addition, the health assessment considered such elements as the presence of decay, weak branch attachments, and the presence of exposed roots due to soil erosion.

The health and aesthetic quality of each tree were rated on a scale of 1 to 5, as follows:

- 1: Very Poor
- 2: Poor
- 3: Fair
- 4: Good
- 5: Excellent

Collected data are included in Appendix C. Individual coast live oak tree locations are shown on Exhibit 3. Finally, the extent of oak woodlands on the project site was mapped during the field survey by delineating their boundary on an aerial photo where 1 inch = 150 feet. The boundaries were then digitized and incorporated into the Geographic Information System (GIS) database for the project. Mapped oak woodland areas are shown on Exhibit 2.

3.2 RESULTS

A total of 77 coast live oak trees with a minimum dbh of 5 inches occur within the survey area. Project construction activities will include constructing a gazebo and replacing three existing bridge/culvert structures in Aliso Creek. Few indirect impacts to oak tree resources are expected as a result of these activities. The proposed gazebo is located on a previously graded pad, and construction of this structure will not remove any oak trees. The removal and replacement of existing bridge/culvert structures will not remove any oak trees.

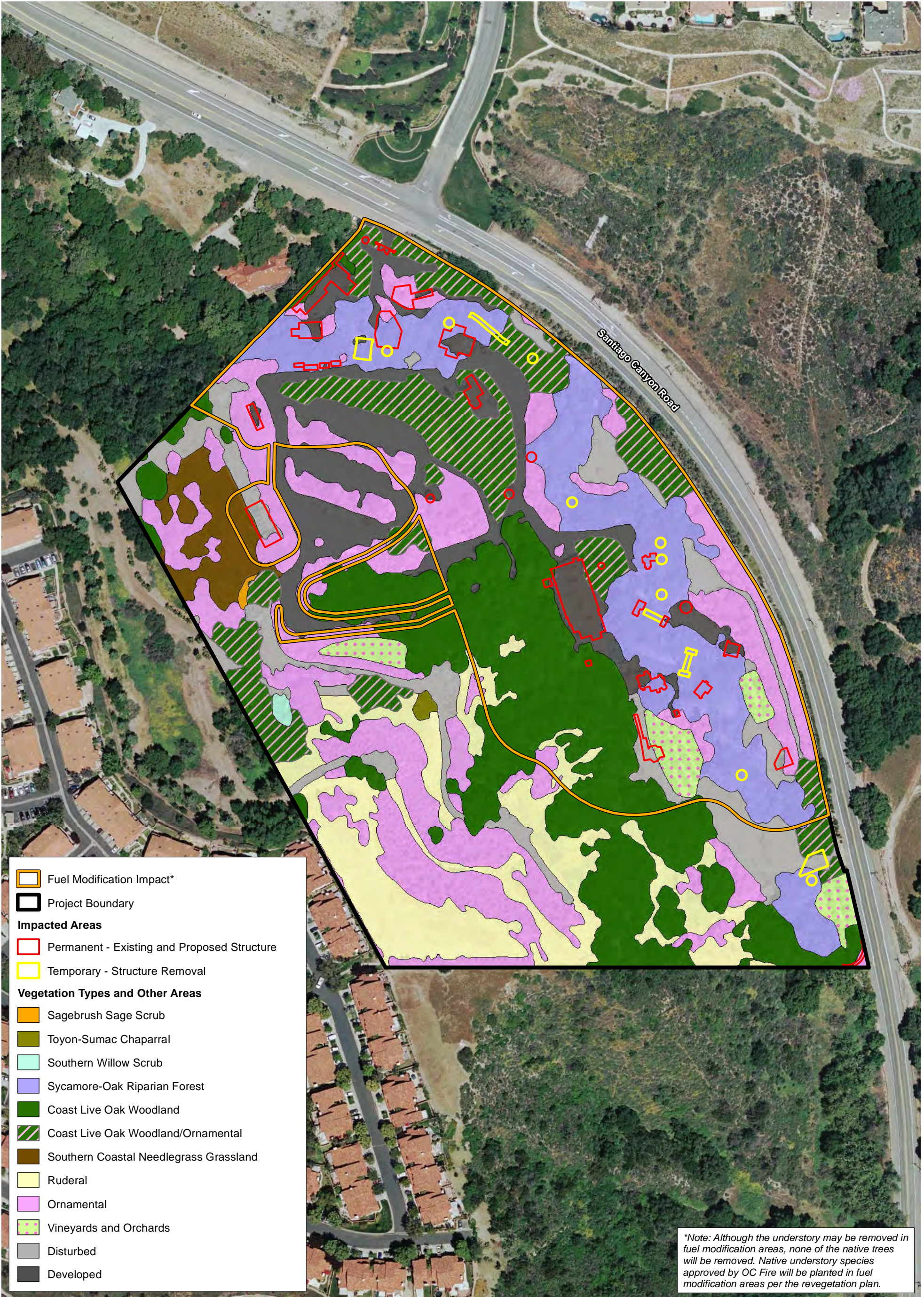
As noted above, none of the trees on the project site need to be removed or thinned for fuel modification purposes; therefore, fuel modification would only impact the understory of vegetation found on site.

Any oak trees that are inadvertently removed during project construction will be replaced in compliance with FTSP and CDFG requirements. Prior to removal of any oak trees on the project site, a Tree Replacement strategy will be developed and will confirm the final number of trees that will be impacted; identify the tree planting location; and describe installation, maintenance, and monitoring requirements for successful establishment of replacement oak trees. Any required tree replacement would be accomplished within the Aliso Creek drainage and would be addressed in the riparian mitigation program required as part of CDFG and U.S. Army Corps of Engineers (USACE) permitting activities. If tree removal impacts do not occur, tree replacement will not be required and adding the tree replacement component to the riparian mitigation program will not be necessary.

4.0 RESOURCE PROTECTION

This section provides a summary of the resource protection measures to be implemented during project construction and during ongoing facility operation in compliance with MM 5.4-6 of the Rancho Las Lomas IS/MND and the guidelines set forth in the FTSP. The critical period for maintaining the high quality and value of preserved resources is just prior to and during project construction. If not managed and monitored properly, construction activities may result in direct and indirect impacts to preserved resources, ultimately resulting in the long-term degradation of resources preserved by project design. Potential direct and indirect impacts include:

- Sediment, erosion, and urban runoff deposition within tree root zones;
- Mechanical damage and clearing;
- Disturbance of nesting birds/raptors
- Root damage; and
- Dust accumulation on tree foliage.



**Note: Although the understory may be removed in fuel modification areas, none of the native trees will be removed. Native understory species approved by OC Fire will be planted in fuel modification areas per the revegetation plan.*

Project Impacts

Oak Management and Preservation Plan
Rancho Las Lomas Project

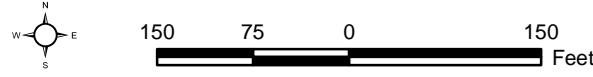
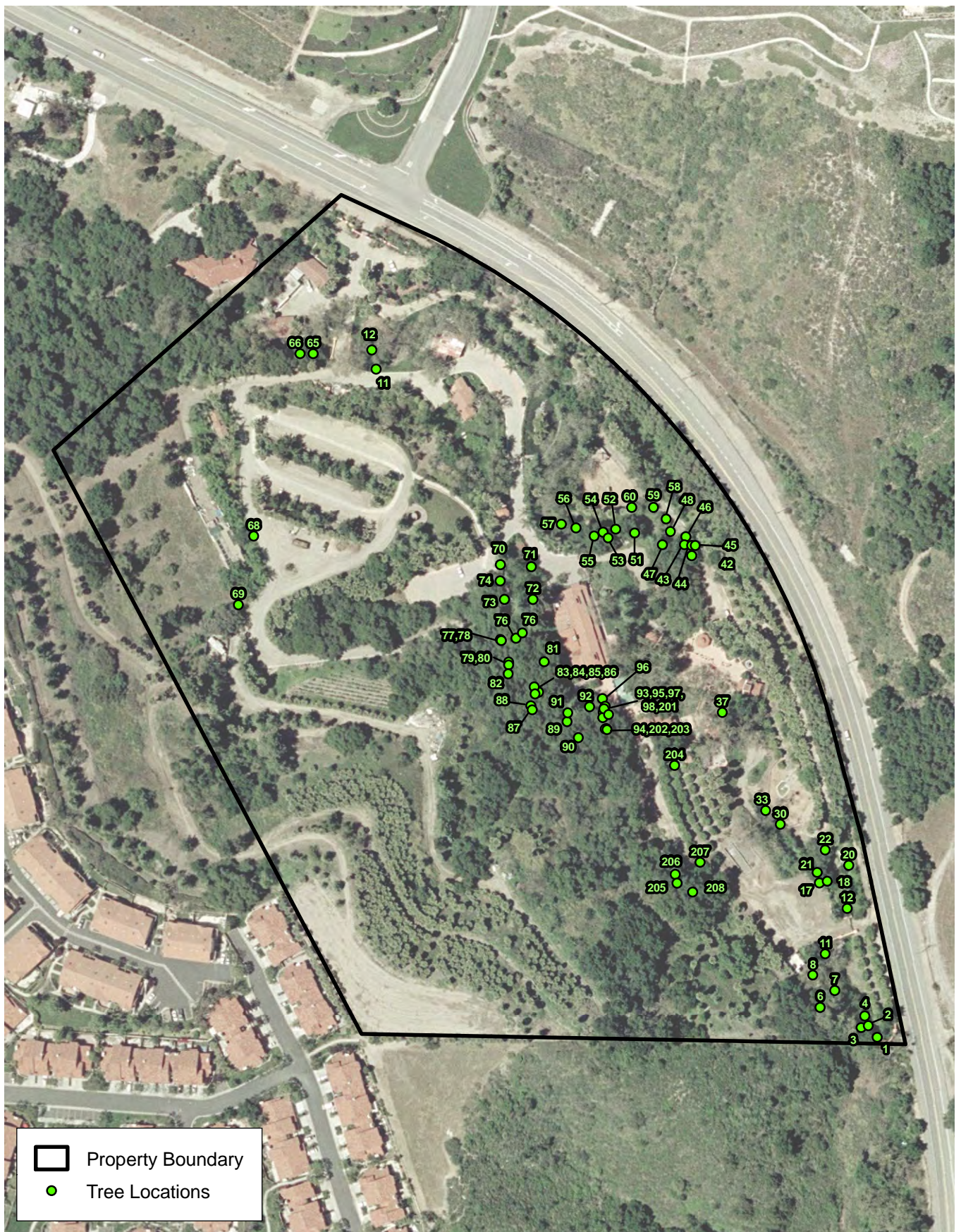


Exhibit 2



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Tree Locations

*Oak Management and Preservation Plan
Rancho Las Lomas Project*

Exhibit 3



200 100 0 200
Feet

Bonterra
CONSULTING

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The timely implementation of the guidelines listed herein will minimize impacts to the protected tree resources and other biological resources and facilitate the long-term preservation of oak woodlands within the project site.

4.1 **RESPONSIBLE ENTITIES**

Successful implementation of resource protection measures will depend upon the cooperative efforts of the Property Owner, the Biological Monitor, and the Contractor. The following outlines the various functions and responsibilities of these entities and individuals.

- **Property Owner.** The Property Owner will be responsible for retaining the Biological Monitor and the Contractor. The Property Owner will be responsible for general oversight of project construction and implementation of the resource protection measures. The Property Owner will ultimately be responsible for the successful implementation of resource protection measures described in the following sections.
- **Biological Monitor.** The Biological Monitor will be experienced in the implementation of resource protection measures, with tree evaluation procedures, and in the evaluation of biological resources. The Biological Monitor will also be an International Society of Arboriculture Certified Arborist, and will be responsible for monitoring the implementation of resource protection measures. The term 'Biological Monitor' also includes biologists that are qualified to perform biological surveys required by project mitigation measures set forth in the IS/MND.
- **Contractor.** The term "Contractor" includes both the general contractor, as well as any subcontractors retained to complete project construction tasks. The Contractor and any subcontractors will be responsible for implementing resource protection measures described in the following sections during all project construction activities.

The Property Owner, the Biological Monitor, and the Contractor will coordinate with one another, as appropriate, during the implementation of the resource protection measures described in the following sections.

4.2 **PROTECTION DURING CONSTRUCTION**

The following resource protection measures will be implemented during all project construction activities, which will include construction of the gazebo and the replacement of existing bridge/culvert structures in Aliso Creek.

4.2.1 **PROTECTIVE FENCING**

Fencing will be used to delineate all preserved tree and oak woodland resources adjacent to construction sites. Fencing will consist of orange construction fencing to protect the root protection zone for all oak trees. Damaged fencing will be repaired and re-installed on an as needed basis throughout construction activities. Fencing will be installed prior to the initiation of any work as specified below:

- **Individual Oaks.** Fencing will be placed around individual oak trees at 5 feet outside each tree's dripline and a minimum of 15 feet from the trunk.
- **Oak Woodland.** Fencing will be placed at 5 feet outside each tree dripline and a minimum of 15 feet from the trunk.

4.2.2 STORAGE AND STAGING

All staging and storage of equipment, vehicles, and materials will be located outside the preserved oak woodland resources and drainages. The staging and storage of construction equipment, vehicles, and materials will be located 25 feet (minimum) from individual coast live oak trees and 50 feet (minimum) from oak woodland areas. Any areas that are needed for staging or storage that are within these buffer areas must be approved by the Biological Monitor.

4.2.3 WATER QUALITY/SOILS QUALITY CONTROL

Foreign materials and/or liquids such as oil, gasoline, or other petroleum products will not be introduced to any soil within preserved oak woodlands; the dripline of individual preserved coast live oak trees or oak woodland areas; or within existing drainages. Should any such contamination of the soil occur, the affected soil will be removed and replaced with acceptable soil.

4.2.4 EROSION CONTROL

Rice straw wattles, hay bales, silt fencing, sediment traps, and/or sandbags will be used on the slopes below work areas to prevent erosion and deposition of materials in protected oak woodland resource areas during project activities.

4.2.5 MANAGEMENT OF SURFACE FLOWS

Project construction activities will not increase surface runoff to preserved individual coast live oak trees and oak woodland areas as a result of irrigation; impermeable surface placement; or storm drain discharge. Water will not be allowed to pond or collect within the dripline of individual coast live oaks or oak woodland as a result of project construction.

4.2.6 VEGETATION CLEARING AND SEASONAL RESTRICTIONS

Construction access will be planned to minimize pruning of preserved resources, and pruning and clearing of native trees, shrubs, and snags should be avoided whenever possible; if avoidance is not feasible, the Biological Monitor will approve any such activity.

Vegetation on the project site could support nesting birds. The Migratory Bird Treaty Act (MBTA) protects the taking of migratory birds and their nests and eggs. Section 8.3.7 of the Natural Communities Conservation Planning Program/Habitat Conservation Plan (NCCP/HCP) Implementation Agreement (IA) for the Central/Coastal Subregion authorizes participating landowners to take species covered by the permit (County of Orange 1996a, 1996b); any such take will not be in violation of the MBTA of 1918, as amended (16 *United States Code* [USC] §§703–712). Raptor species (i.e., birds of prey) have potential to nest in the woodland vegetation types on the project site. Active raptor nests are protected by the Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code*.

The implementation of the following measure shall be performed to reduce any impacts to nesting birds or raptor species:

- Vegetation removal/weed abatement activities will occur from September 16 to January 31, which is outside the peak bird nesting season (February 15–September 15; February 1–June 30 for raptors) to the extent practicable. If these activities cannot occur outside this time frame, a nesting bird survey will be conducted by a qualified Biologist

within three days prior to the onset of vegetation removal/weed abatement activities. If no active nests are found, no further mitigation would be required.

- If nesting activity is present on the project site, the active site will be protected until nesting activity has ended to ensure compliance with the MBTA and Section 3503.5 of the *California Fish and Game Code*. To protect the nest, the following restrictions will be required until the nest is no longer active, as determined by a qualified Biologist: (1) clearing limits will be established (25–200 feet depending on the sensitivity of the species and a minimum of 300 feet for nesting raptors) in any direction from any occupied nest and (2) access and surveying will be restricted within the buffer. Any encroachment into the buffer area around the known nest will only be allowed if it is determined by a qualified Biologist that the proposed activity will not disturb the nest occupants.

4.2.7 DUST AND LITTER CONTROL

All native vegetation—including oak woodland resources—in the vicinity of construction activities will be sprayed with water, as necessary, to reduce dust accumulation on the leaves. All trash associated with construction or personnel on the project site will be properly contained and disposed of.

4.2.8 MONITORING

The Biological Monitor will monitor the installation of a protective fence and will be present, as needed, during construction activities to prevent any direct impacts to oak woodland resources. In addition, a post-construction report will be prepared by the Biological Monitor for submittal to the County of Orange and other agencies, as appropriate. This report will document implemented protection measures and the general condition of protected oak woodland resources.

4.3 ONGOING MANAGEMENT AND PROTECTION MEASURES

Ongoing facility operations and maintenance activities can potentially result in clearing of native vegetation, increased runoff, degradation of water quality, and/or erosion. Ongoing activities will consist of the continued operation of the project site as a wedding and general event facility as well as the implementation of the required fuel modification program on an as-needed basis. Additionally, the small private zoo facilities consisting of animal cages, pens, and corrals will be maintained on site on an ongoing basis. Specific protection and management measures that minimize impacts during facility use and operation are discussed below and will be implemented by the Property Owner.

4.3.1 EQUIPMENT STORAGE AND ACCESS

Equipment will not be stored, parked, or operated within or adjacent to the protected coast live oak woodland areas or adjacent to individual oak trees. Vehicular access will be limited to designated access roads and parking areas.

4.3.2 LOCATION OF ACTIVITIES AND STRUCTURES

Any grading activities will be located a minimum of 15 feet from the dripline of preserved individual coast live oak trees and a minimum of 25 feet from the dripline of preserved oak woodlands as much as possible. Retaining walls will be used to protect the existing grades of oak trees from any adjacent cut and fill located within these setback areas. The placement of

retaining walls should not alter existing drainages adjacent to individual oak trees or oak woodland areas.

Operation activities will avoid the placement of permeable and impermeable surfaces within a six-foot radius of oak tree trunks. If placement of surfaces within close proximity of oak tree trunks is unavoidable, alternative surfaces such as gravel, porous brick with sand joints, or other appropriate materials will be used. If utility line trenching is required within oak tree root zones, only one trench will be used to accommodate all utility lines. A Certified Arborist will provide recommendations for use of alternate paving surfaces and appropriate root trimming and associated canopy pruning procedures.

4.3.3 VEGETATION CLEARING

Pruning of preserved oak woodland resources will be avoided as much as possible. If pruning of foliage, root zones, or other sensitive areas is necessary, a Certified Arborist will provide recommendations for appropriate pruning locations and methods.

Vegetation on the project site could support nesting birds. The MBTA protects the taking of migratory birds and their nests and eggs. Section 8.3.7 of the NCCP/HCPA for the Central/Coastal Subregion authorizes participating landowners to take species covered by the permit; any such take will not be in violation of the MBTA of 1918, as amended (16 USC §§703–712). Raptor species (i.e., birds of prey) have potential to nest in the woodland vegetation types on the project site. Active raptor nests are protected by the Sections 3503, 3503.5, and 3513 of the *California Fish and Game Code*. The implementation of the following measure shall be performed to reduce any impacts to nesting birds or raptor species:

- Vegetation removal activities performed for fuel maintenance will occur from September 16 to January 31, which is outside the peak bird nesting season (February 15–September 15; February 1–June 30 for raptors) to the extent practicable. If these activities cannot occur outside this time frame, a nesting bird survey will be conducted by a qualified Biologist within three days prior to the onset of vegetation removal/weed abatement activities. If no active nests are found, no further mitigation would be required.
- If nesting activity is present on the project site, the active site will be protected until nesting activity has ended to ensure compliance with the MBTA and Section 3503.5 of the *California Fish and Game Code*. To protect the nest, the following restrictions will be required until the nest is no longer active, as determined by a qualified Biologist: (1) clearing limits will be established (25–200 feet depending on the sensitivity of the species and a minimum of 300 feet for nesting raptors) in any direction from any occupied nest and (2) access and surveying will be restricted within the buffer. Any encroachment into the buffer area around the known nest will only be allowed if it is determined by a qualified Biologist that the proposed activity will not disturb the nest occupants.

4.3.4 LITTER CONTROL

All trash and debris associated with ongoing facility operations will be properly contained and disposed of.

4.3.5 WATER QUALITY/SOILS QUALITY CONTROL

Foreign materials and/or liquids such as oil, gasoline, or other petroleum products shall not be introduced to any soil within the dripline of individual coast live oak trees or oak woodland areas,

or within existing drainages. Should any such contamination of the soil occur, the affected soil shall be removed and replaced with acceptable soil.

Runoff from zoo facilities containing manure, bedding, or feed debris represents a possible source of pollutants for oak woodland resources. Preventative measures include some of the examples listed below. Generally these measures serve to prevent the runoff that comes into contact with manure, bedding, or feed debris from impacting oak woodland resources and biological resources in general. These measures include:

- Regular removal of manure from zoo facilities;
- Temporary storage for manure that cannot be disposed of daily and location of storage areas away from oak woodland resources and drainages;
- Storage of manure on an impervious surface (a concrete pad or plastic tarp) and covering with a roof or tarp during rainfall to prevent leaching or runoff of pollutants; and
- Limiting of on-site manure storage to one week or less.

4.3.6 MANAGEMENT OF SURFACE FLOWS

Ongoing operations will not increase surface runoff to preserved individual coast live oak trees and oak woodland areas as a result of irrigation; impermeable surface placement; or storm drain discharge. Water will not be allowed to pond or collect within the dripline of individual coast live oaks or oak woodland as a result of project construction.

5.0 REFERENCES

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- . 1991 (December). *Foothill/Trabuco Specific Plan*. Santa Ana, CA: County of Orange, Environmental Management Agency.¹
- Orange County Fire Authority, Planning & Development Services Section. 2008 (January). *Guideline for Fuel Modification Plans and Maintenance Program*, Santa Ana, CA: OCFA.

¹ The County of Orange, Environmental Management Agency is now known as OC Public Works.

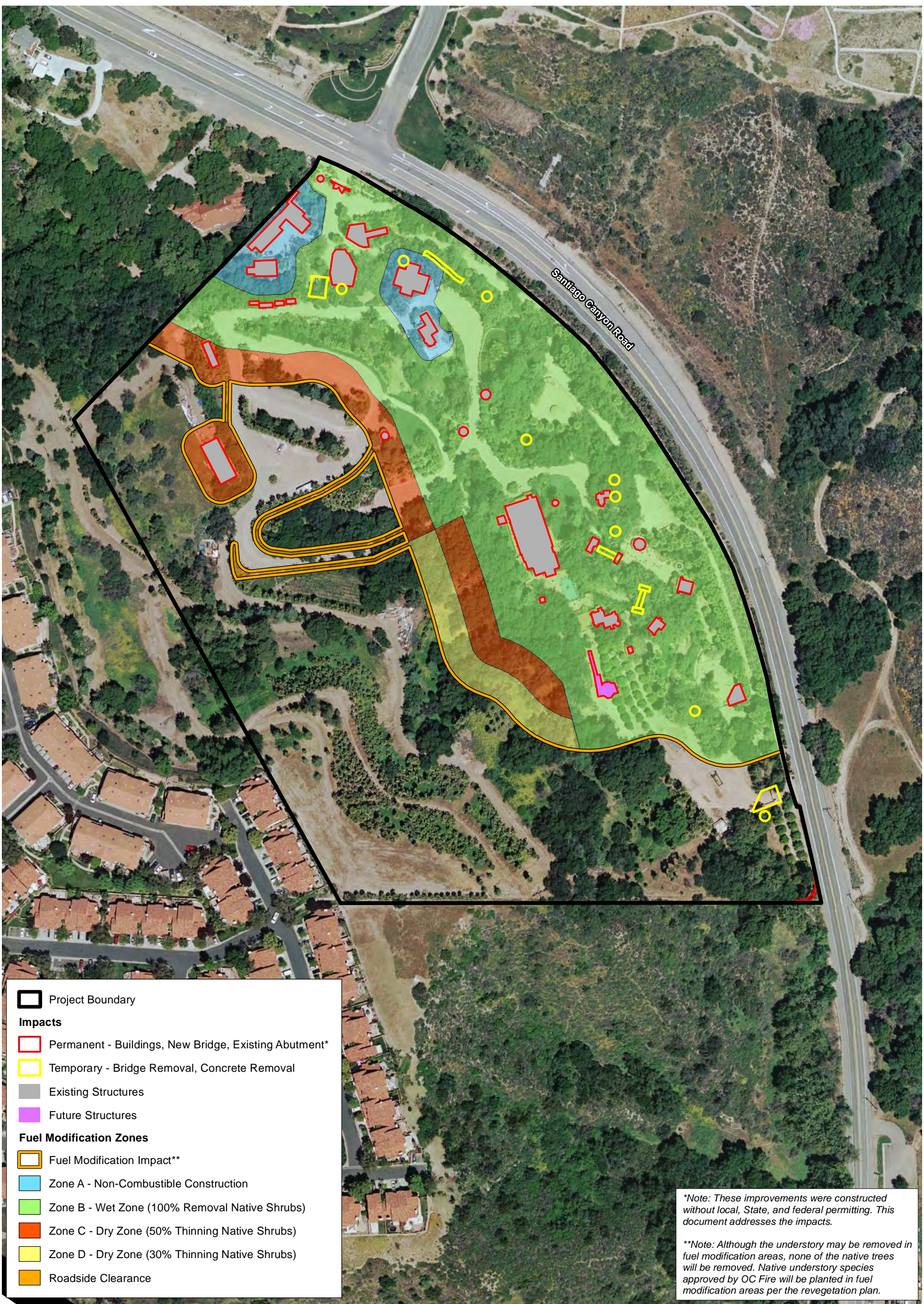
APPENDIX A

FOOTHILL/TRABUCO SPECIFIC PLAN LAND USE DISTRICTS

* NOTE: THE RESOURCES OVERLAY DISTRICT APPLIES TO THE ENTIRE SPECIFIC PLAN AREA. THE MAXIMUM NUMBER OF DWELLING UNITS AND COMMERCIAL SQUARE FOOTAGE ALLOWED IS IDENTIFIED IN THE SPECIFIC PLAN STATISTICAL SUMMARY.



APPENDIX B
FUEL MODIFICATION AREAS



Fuel Modification Areas

Oak Management and Preservation Plan
Rancho Las Lomas Project

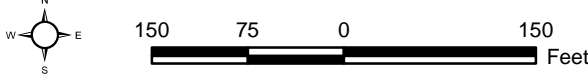


Exhibit B-1



APPENDIX C

MARCH 6 AND 13, 2009 TREE SURVEY DATA

| Tree Tag # | Tree Species | # Main Trunks | D.B.H. (in) | | Sum of Trunks | Height (ft) | Canopy Diameter (ft) | Health Rating | Aesthetic Rating | Notes |
|------------|--------------------------|---------------|-------------|-----------|---------------|-------------|----------------------|---------------|------------------|--------------------------|
| | | | 1st Trunk | 2nd Trunk | | | | | | |
| 1 | <i>Quercus agrifolia</i> | 1 | 18.7 | | 18.7 | 45 | 20 | 5 | 5 | |
| 2 | <i>Quercus agrifolia</i> | 1 | 27.4 | | 27.4 | 40 | 25 | 5 | 5 | |
| 3 | <i>Quercus agrifolia</i> | 1 | 20.5 | | 20.5 | 60 | 20 | 5 | 5 | |
| 4 | <i>Quercus agrifolia</i> | 1 | 16.2 | | 16.2 | 20 | 40 | 2 | 2 | severe lean toward road |
| 6 | <i>Quercus agrifolia</i> | 3 | 22.1 | 12.9 | 35.0 | 35 | 20 | 3 | 4 | exposed roots, leaning |
| 7 | <i>Quercus agrifolia</i> | 1 | 6.2 | | 6.2 | 35 | 10 | 5 | 4 | |
| 8 | <i>Quercus agrifolia</i> | 1 | 12.6 | | 12.6 | 30 | 15 | 4 | 4 | exposed roots, undercut |
| 11 | <i>Quercus agrifolia</i> | 1 | 20.7 | | 20.7 | 70 | 20 | 5 | 5 | |
| 12 | <i>Quercus agrifolia</i> | 5 | 3.7 | 3.5 | 7.3 | 25 | 15 | 4 | 2 | |
| 17 | <i>Quercus agrifolia</i> | 1 | 13.1 | | 13.1 | 30 | 20 | 4 | 4 | fill under tree |
| 18 | <i>Quercus agrifolia</i> | 1 | 8.4 | | 8.4 | 20 | 10 | 4 | 4 | |
| 20 | <i>Quercus agrifolia</i> | 2 | 8.8 | 3.8 | 12.6 | 35 | 15 | 4 | 3 | immediately above riprap |
| 21 | <i>Quercus agrifolia</i> | 1 | 14.8 | | 14.8 | 45 | 15 | 5 | 5 | |
| 22 | <i>Quercus agrifolia</i> | 1 | 26.5 | | 26.5 | 40 | 25 | 5 | 5 | |
| 30 | <i>Quercus agrifolia</i> | 1 | 15.4 | | 15.4 | 20 | 10 | 4 | 3 | leaning |
| 33 | <i>Quercus agrifolia</i> | 1 | 15.3 | | 15.3 | 50 | 20 | 4 | 4 | exposed roots, undercut |
| 37 | <i>Quercus agrifolia</i> | 1 | 22.7 | | 22.7 | 50 | 20 | 5 | 5 | |
| 42 | <i>Quercus agrifolia</i> | 1 | 8.5 | | 8.5 | 25 | 10 | 5 | 4 | |
| 43 | <i>Quercus agrifolia</i> | 1 | 8.0 | | 8.0 | 25 | 15 | 5 | 4 | slight lean |
| 44 | <i>Quercus agrifolia</i> | 2 | 11.9 | 3.5 | 15.4 | 30 | 15 | 5 | 4 | |
| 45 | <i>Quercus agrifolia</i> | 2 | 21.2 | 16.3 | 37.5 | 35 | 20 | 5 | 4 | |
| 46 | <i>Quercus agrifolia</i> | 1 | 9.4 | | 9.4 | 25 | 10 | 4 | 3 | leaning |
| 47 | <i>Quercus agrifolia</i> | 2 | 13.3 | 11.0 | 24.3 | 40 | 20 | 4 | 4 | co-dominant stems |
| 48 | <i>Quercus agrifolia</i> | 3 | 9.8 | 8.9 | 18.7 | 40 | 20 | 4 | 3 | |
| 51 | <i>Quercus agrifolia</i> | 1 | 9.7 | | 9.7 | 30 | 15 | 5 | 5 | |
| 52 | <i>Quercus agrifolia</i> | 1 | 7.2 | | 7.2 | 25 | 10 | 4 | 4 | leaning over steep bank |
| 53 | <i>Quercus agrifolia</i> | 2 | 10.6 | 8.6 | 19.1 | 30 | 20 | 4 | 4 | |
| 54 | <i>Quercus agrifolia</i> | 1 | 10.0 | | 10.0 | 25 | 15 | 4 | 4 | leaning |
| 55 | <i>Quercus agrifolia</i> | 1 | 17.4 | | 17.4 | 40 | 15 | 5 | 5 | |
| 56 | <i>Quercus agrifolia</i> | 1 | 17.0 | | 17.0 | 45 | 25 | 5 | 5 | |
| 57 | <i>Quercus agrifolia</i> | 1 | 23.6 | | 23.6 | 40 | 25 | 5 | 5 | |
| 58 | <i>Quercus agrifolia</i> | 3 | 5.3 | 2.7 | 8.0 | 10 | 10 | 5 | 3 | |
| 59 | <i>Quercus agrifolia</i> | 2 | 13.6 | 6.7 | 20.3 | 25 | 25 | 3 | 2 | trunk decay |
| 60 | <i>Quercus agrifolia</i> | 1 | 6.9 | | 6.9 | 20 | 10 | 4 | 4 | |

| Tree Tag # | Tree Species | # Main Trunks | D.B.H. (in) | | Sum of Trunks | Height (ft) | Canopy Diameter (ft) | Health Rating | Aesthetic Rating | Notes |
|------------|--------------------------|---------------|-------------|-----------|---------------|-------------|----------------------|---------------|------------------|---------------------------|
| | | | 1st Trunk | 2nd Trunk | | | | | | |
| 61 | <i>Quercus agrifolia</i> | 1 | 6.2 | | 6.2 | 20 | 10 | 5 | 4 | |
| 62 | <i>Quercus agrifolia</i> | 3 | 24.5 | 24.2 | 48.7 | 40 | 40 | 3 | 4 | severely undercut |
| 65 | <i>Quercus agrifolia</i> | 1 | 23.0 | | 23.0 | 45 | 20 | 3 | 4 | exposed roots, undercut |
| 66 | <i>Quercus agrifolia</i> | 1 | 12.7 | | 12.7 | 45 | 15 | 3 | 3 | exposed roots, undercut |
| 68 | <i>Quercus agrifolia</i> | 1 | 12.2 | | 12.2 | 25 | 15 | 5 | 5 | fill soil within dripline |
| 69 | <i>Quercus agrifolia</i> | 1 | 11.1 | | 11.1 | 20 | 10 | 5 | 4 | |
| 70 | <i>Quercus agrifolia</i> | 1 | 14.5 | | 14.5 | 30 | 10 | 3 | 3 | |
| 71 | <i>Quercus agrifolia</i> | 2 | 8.7 | 8.5 | 17.1 | 20 | 10 | 4 | 4 | no tag |
| 72 | <i>Quercus agrifolia</i> | 2 | 4.7 | 2.8 | 7.5 | 15 | 10 | 4 | 3 | |
| 73 | <i>Quercus agrifolia</i> | 2 | 14.2 | 12.3 | 26.5 | 30 | 20 | 3 | 4 | |
| 74 | <i>Quercus agrifolia</i> | 1 | 15.3 | | 15.3 | 25 | 15 | 4 | 4 | |
| 75 | <i>Quercus agrifolia</i> | 1 | 21.3 | | 21.3 | 25 | 20 | 4 | 4 | |
| 76 | <i>Quercus agrifolia</i> | 2 | 13.8 | 13.0 | 26.8 | 40 | 20 | 5 | 4 | |
| 77 | <i>Quercus agrifolia</i> | 1 | 12.1 | | 12.1 | 40 | 15 | 5 | 5 | |
| 78 | <i>Quercus agrifolia</i> | 2 | 14.7 | 14.5 | 29.2 | 40 | 40 | 5 | 5 | |
| 79 | <i>Quercus agrifolia</i> | 2 | 30.7 | 24.5 | 55.2 | 60 | 40 | 5 | 5 | |
| 80 | <i>Quercus agrifolia</i> | 1 | 10.7 | | 10.7 | 25 | 15 | 3 | 3 | |
| 81 | <i>Quercus agrifolia</i> | 2 | 25.9 | 20.5 | 46.4 | 50 | 30 | 4 | 4 | |
| 82 | <i>Quercus agrifolia</i> | 1 | 17.4 | | 17.4 | 35 | 20 | 4 | 4 | |
| 83 | <i>Quercus agrifolia</i> | 1 | 15.0 | | 15.0 | 20 | 20 | 4 | 3 | leaning |
| 84 | <i>Quercus agrifolia</i> | 1 | 13.0 | | 13.0 | 30 | 20 | 4 | 3 | leaning |
| 85 | <i>Quercus agrifolia</i> | 1 | 7.2 | | 7.2 | 20 | 10 | 4 | 4 | |
| 86 | <i>Quercus agrifolia</i> | 1 | 28.0 | | 28.0 | 60 | 30 | 5 | 5 | |
| 87 | <i>Quercus agrifolia</i> | 1 | 15.5 | | 15.5 | 30 | 20 | 4 | 4 | leaning |
| 88 | <i>Quercus agrifolia</i> | 2 | 12.1 | 9.4 | 21.6 | 25 | 25 | 4 | 3 | co-dominant stems |
| 89 | <i>Quercus agrifolia</i> | 1 | 9.7 | | 9.7 | 20 | 10 | 5 | 4 | |
| 90 | <i>Quercus agrifolia</i> | 1 | 36.8 | | 36.8 | 40 | 40 | 5 | 4 | |
| 91 | <i>Quercus agrifolia</i> | 1 | 5.1 | | 5.1 | 20 | 10 | 5 | 4 | |
| 92 | <i>Quercus agrifolia</i> | 1 | 9.1 | | 9.1 | 25 | 15 | 5 | 5 | |
| 93 | <i>Quercus agrifolia</i> | 1 | 9.7 | | 9.7 | 20 | 10 | 5 | 5 | |
| 94 | <i>Quercus agrifolia</i> | 2 | 8.1 | 4.7 | 12.8 | 25 | 10 | 4 | 4 | leaning |
| 95 | <i>Quercus agrifolia</i> | 1 | 7.1 | | 7.1 | 15 | 10 | 5 | 4 | |
| 96 | <i>Quercus agrifolia</i> | 1 | 5.9 | | 5.9 | 25 | 10 | 5 | 5 | |
| 97 | <i>Quercus agrifolia</i> | 1 | 8.0 | 7.5 | 15.5 | 30 | 15 | 5 | 4 | |

| Tree Tag # | Tree Species | # Main Trunks | D.B.H. (in) | | Sum of Trunks | Height (ft) | Canopy Diameter (ft) | Health Rating | Aesthetic Rating | Notes |
|------------|--------------------------|---------------|-------------|-----------|---------------|-------------|----------------------|---------------|------------------|---------|
| | | | 1st Trunk | 2nd Trunk | | | | | | |
| 98 | <i>Quercus agrifolia</i> | 3 | 8.5 | | 8.5 | 30 | 10 | 5 | 4 | |
| 201 | <i>Quercus agrifolia</i> | 1 | 6.1 | | 6.1 | 20 | 10 | 4 | 4 | leaning |
| 202 | <i>Quercus agrifolia</i> | 1 | 7.2 | | 7.2 | 20 | 10 | 5 | 4 | |
| 203 | <i>Quercus agrifolia</i> | 1 | 10.5 | | 10.5 | 30 | 10 | 5 | 4 | |
| 204 | <i>Quercus agrifolia</i> | 1 | 21.5 | | 21.5 | 50 | 25 | 5 | 5 | no tag |
| 205 | <i>Quercus agrifolia</i> | 1 | 16.6 | | 16.6 | 25 | 15 | 5 | 5 | |
| 206 | <i>Quercus agrifolia</i> | 3 | 5.1 | 4.8 | 9.9 | 10 | 10 | 3 | 2 | |
| 207 | <i>Quercus agrifolia</i> | 2 | 5.2 | 4.5 | 9.7 | 6 | 10 | 3 | 2 | |
| 208 | <i>Quercus agrifolia</i> | 2 | 34.2 | 13.2 | 47.4 | 35 | 20 | 4 | 4 | |

